Prepared by the International Trade Development Branch

Publication préparée par le Secteur de l'expansion du commerce extérieur

External Affairs and International Trade Canada

Affaires extérieures et Commerce extérieur Canada

92-05393/

MARKET STUDY ON
THE SOFTWARE MARKET
IN KOREA

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This market guide booklet has been prepared with the problems inherent to the initiating exporter in mind. However, it is not exhaustive; individual circumstances, interests and needs will dictate how companies should tailor their approach and strategy to the Korean market. While every attempt has been made to ensure accuracy in this study, no responsibility can be accepted for errors or omissions.

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November, 1991

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Executive Summary

Following is a summary of the key characteristics of Korea's software market discussed in more detail in this report:

[] Software program sales in Korea reached a value of US$254 million in 1990, increasing 13.5% from the previous year. Almost half of these revenues came from sales of system software, for which the market is still highly dependent on imported products.

[] Korea's software export industry is still in its infancy, recording only US$15 million in shipments in 1990. This is in contrast to software imports of US$94.7 million in the same year.

[] Korea's existing legislation for the protection of intellectual property rights is generally adequate, but some problems still remain in the area of enforcement.

[] A number of major computerization projects and government inducements for increased computerization and automation in Korea's manufacturing, distribution and financial industries will provide strong demand for software over the next five years.

[] Although domestic software companies account for the major share of software revenues, their revenues come predominantly from orders for customized software and services in a few specialized industries or for general business management packages such as personnel and payroll or supply and inventory.

[] Foreign software is widely distributed by the local offices and agents of hardware manufacturers and by system integrators. Relatively few foreign vendors other than hardware manufacturers have a substantial presence in Korea as of yet.

[] Korea's software market will grow 25-30% annually over the next five years and opportunities for Canadian firms exist in a large number of different application areas. The Korean government has announced measures for supporting the development of technology through tie-ups with foreign firms.

Korean Software Industry Overview

The roots of the software industry in Korea can be traced back to the opening of the data processing centers at the Korea Institute of Science and Technology (KIST), where the nation's first mainframe, a Control Data 3300, was installed, and at the Korea Productivity Center (KPC) in 1967.

These openings coincided with the founding of the Ministry of Science and Technology to which both KIST and KPC are subordinate. Thus officials are inclined to say that the history of the software industry equates in large part to the history of this ministry.

Up until 1980, these were the primary organizations which centered on the development of application software to meet computer users' needs. For fifteen years after this initial start, little growth took place in the software industry. Computer users relied heavily on imported software or the limited software developed by these organizations or in-house at computer installation sites.

It was not until 1983 that a fair number of private concerns began to spring up, encouraged by the designation of that year as the "Year for Fostering the Information Industry". Marking this as a turning-point, for the remainder of the decade, the number of software-related concerns grew with the increased demand from the user community spurred on by active promotion of software products.

A major impetus for demand came in the late 1980s as the domestic personal computer manufacturing industry began. In concert with the strong demand for PC hardware, general business software packages for use on PCs were developed by PC vendors and offered to prospective PC buyers bundled with the systems. Although this brought in little in the way of revenues for the industry, it did plant the seeds for future demand. This demand is now growing steadily as more and more users outgrow the capabilities of those initial rudimentary packages.

Other major events in 1983 included the formation of recommendations for software import business and the approval for the establishment of the Federation of Korean Information Industries. Three years later, legislation for the protection of computer programs was enacted along with an act the following year for the promotion of software development.

Late in 1987, a development plan for an industrial complex to be built up for companies specializing in software was announced. In June of 1988, the Korea Software Industry Association (KOSA) received approval for its foundation. As of 1991, the association has 150 members.

Its fuctions are to "support the (various) research associations with administration, to maintain cohesive relationships among software industries, to suggest the improvement of regulations and policies to the authorities concerned, and to promote and conduct seminars and PR activities with other associations and institutes."

At the end of 1990 there were 26 companies specializing in software in Korea, representing 11% of all companies engaged in information industry-related business, according to the Electronic Industry Association of Korea (EIAK). This number of companies increased from 18 the previous year. These companies derived over 70% of their computer revenues from software revenues and over 50% of their software revenues from software production.

In addition, another 148 companies were engaged in a combination of information industry-related business endeavors, making up 60% of the total number of companies. This number actually decreased by 10 companies from 1989.

Of the 26 software specialists, 19 companies had less than 50 employees, 5 had from 50 to 99 and the remaining two had between 100 and 199 employees. All 26 had information industry-related earnings in 1990 of less than US$10 million and more than half of these had less than US$1 million.

The number of system engineers and analysts working in the software field of the information industry in Korea increased 31% to 3,789 in 1990. Programmers numbered 4,982, up 25% from a year earlier.

Intellectual Property Protection in Korea

Korea has two existing laws which pertain to the protection of software programs and copyrights:

1) The Copyright Act of the Republic of Korea was promulgated in January of 1957, amended in December of 1986, and became effective on July 1, 1987. The enforcement decree which accompanied it became effective on the same date.

2) The Computer Program Protection Act was passed in December of 1986 and also went into effect July 1st in 1987. The enforcement decree and enforcement regulations for this Act became effective in July and in August of the same year.

COPYRIGHT ACT

"Computer program works" are mentioned specifically under the article of this Act which outlines the types of works to which the author is entitled to rights and protection.

The protection periods and terms for these copyrights are comparable to international standards. This protection, however, is not retroactive and may be restricted under circumstances where a foreign country from which a foreign author's work originates "does not protect works of the nationals of the Republic of Korea".

Redress for infringement is ample under the Act; claims for damages by the owner of economic rights include both the amount of damages sustained and the amount that the owner "could have earned by the ordinary exercise of his rights". Protection is also provided for the moral rights of the author.

Unfortunately, penal provisions are not heavy - penalties may not exceed three million won (US$4,000) in fines or three years imprisonment for criminal infringements of economic or moral rights to include unauthorized reproduction, and one million won (US$1,333) or one year imprisonment for other illegal acts. Lacking in the Act is a disincentive to repeated offenses such as harsher penalties for multiple violations.

COMPUTER PROGRAM PROTECTION ACT

The primary purpose of this legislation is stated as being "to contribute to a sound development of the national economy by protecting the author's rights of computer program works ... and striving for fair utilization of the program, and promoting therethrough the program-related industry and technology".

The term of the copyright is stipulated as fifty years from the time the program was written or upon the death of the copyright owner where there is no designated heir.

No specific action is required by the author other than the creation of the program to be credited with the copyright, and the author may register programs within one year of their creation with the Ministry of Science and Technology. This ministry maintains and publishes a listing of registered programs. There are nominal fees and information required to undergo this process of registration, but it can prove very beneficial should litigation be required at some future date.

Regarding this registration, the Act stipulates that "no person having failed to register his program shall oppose a third person with regard to the following matters:

1. Transfer (excluding cases of inheritance and other general succession) or restriction on disposal of program copyrights; and

2. Establishment, transfer, modification, extinction or disposal restriction of the pledge right the object of which is the program copyrights."

At the time of registration, one reproduction of the program must be presented; the Act contains a clause stipulating public officials' duty to maintain secrecy. Violators of this confidentiality also face penalties of up to one million won or up to one year imprisonment. Other penalties applicable are consistent with those described above for the Copyright Act.

Those intending to use programs for which the copyright owner is unknown are required to deposit a compensatory fee determined by the Ministry of Science and Technology based on the regular sale price of each specific program.

A Program Deliberation Committee was established under Chapter V of the Act to deal with issues related to program copyrights; it is composed of public officials and experts

in programs and copyrights under the purview of the Ministries of Science and Technology, and Culture and Information.

One potential problem area with this legislation is a clause making provision for use of the software by private individuals, including the use of the software for limited educational purposes in school classrooms.

Enforcement and Prosecution

While the legislation outlined above is generally considered to be acceptable with the exceptions noted, enforcement of these laws is still widely considered to be lacking. The burden of proof has been placed on the company being infringed upon and there have been numerous complaints in past years that officials were not making a concerted effort to ferret out companies enjoying profits at others' expense.

The Director General of the World Intellectual Property Organization (WIPO) pointed to problems such as understaffing; budgetary constraints on the courts, customs officials and police; and the low level of officials' awareness of the marketplace as being the major obstacles to effective enforcement and prosecution while commenting that protection had markedly improved overall. He visited Korea early in the summer to take part in the opening ceremony of the International Intellectual Property Training Institute newly organized under the Korea Industrial Property Office.

As of late, it appears that significant progress is being made in securing better enforcement efforts as a result of several practical considerations. The first of these is that Korea has come to the realization that it cannot continue to develop and manufacture competitive products in high-tech industries without the infusion of key technology from other industrialized nations.

Because of Korea's poor protection of intellectual property rights in the past, foreign corporations holding these technologies have been very hesitant in transferring them to their Korean trading partners. Korea now realizes that they must make improvements in protection of these rights if they are to gain access to the technology they need to realize their goal of becoming an advanced nation.

Another practical consideration is becoming evident as Korea's software industry begins to generate software which has potential for sales in export markets. Korean companies are becoming concerned about their own protection and this

has made them more sympathetic to calls by foreign companies for more stringent measures within their country.

One other influence is the Korean government's concern for its international standing in the area of high-tech. They formally set goals for attaining rankings among the world's advanced countries for key milestones, such as their achievement last year of having the eighth largest number of telephone switching lines installed in the world. They can ill afford to have black marks against them at a time when they are setting their sights on becoming an advanced nation themselves by the end of this century.

Regardless of the motives involved, the stage has been set for effective change. To Canadian firms considering entering the software market but hesitating because of this issue, although precautions should be taken, this should not be seen any longer as a reason in and of itself for delaying participation in Korea's computer software market.

In the area of prosecution, although it can be a frustrating and drawn-out process, cases have and are being prosecuted and violators penalized for their actions. Again, however, in most of these cases it has been the company infringed upon that uncovered the infringements and initiated the investigation, and continual prodding of officials has been required to move things along.

For this reason, a foreign company's deliberations in selecting the form of their local operation, whether it be a branch office, joint-venture, distributing agent or some combination thereof, should give attention to the issue of how the local operation can serve as a watchdog for the overseas office(s) and what the local management's philosophy and track record is on the issue of intellectual property rights protection.

Naturally, the level of expertise and experience with intellectual property rights legislation and litigation in Korea is also a key criteria in selecting a local legal representative for the company.

In recent months, the Business Software Association has been active in prompting the Seoul District Prosecutor's Office to crackdown on three companies that were copying or distributing software from Lotus, Microsoft and Ashton-Tate and three other U.S. companies without permission. In October of this year, these three Korean companies were indicted for unauthorized copying and use of software, marking the first cases in which Korean companies were indicted for this crime. Fines for the three companies ranged from US$670 to US$2,680.

Potential Barriers and Impediments

In addition to the impediment to sales that occurs when illegal copies of software are distributed unchecked, a number of other circumstances can bring about an impaired ability to do business and realize adequate levels of profit in Korea.

One of these is the uncertainty that surrounds the cost of bringing software into Korea. Although a number of foreign software suppliers to Korea have indicated that total customs duties, taxes and administrative charges levied on software imported to Korea can average 22% of the software's value, problems frequently arise, serious ones at times, owing to the poor awareness on the part of customs agents as to what is software, what the fair market value of the software is, and so on. Clearing up these matters can require a good deal of time and some customers are lost as a result.

Customs officials also generally apply the same duties based on list prices even for demonstration and evaluation (D&E) or sample programs. There is also a considerable amount of uncertainty about the customs duties applicable to masters imported to Korea from which copies will be locally produced. At the extreme, duties may amount to a percentage of what the reasonable potential sales volume for the software is estimated to be (by the customs officials). To avoid this, companies may opt to try electronically transmitting the master copy into the country since there is no stipulation for duties on things that do not physically pass through a port of entry. This option, however, is fraught with its own problems.

Once the software has entered the country, the main obstacles to sales lie in the nature of the potential buyers and in the general consumer community's attitudes.

Particularly for PC software, users are accustomed to obtaining their operating system software and general office automation packages at no perceived cost to them for one of two reasons:

1. The dealer making the sale provided illegal copies of imported software free of charge to the user at the time of hardware installation as a "service" to the customer

2. The user, in purchasing a PC from a domestic maker who also has developed local OA packages, receives this local software bundled with the hardware purchase at no discernable cost. Whether it has been factored into the price of the hardware is not an issue considered by the buyer.

The effect that this has on the imported package distributor is clear. The user is accustomed to receiving software free of charge and will object to paying the high prices involved in acquiring legal imported software. Additionally, until recently, Korean PC users have been able to make do with these nascent local packages. They may not be aware of the additional capabilities that make the imported software a reasonable value or they may simply not need these extra functions yet.

Users also feel no remorse in making use of the copies obtained illegally from the dealers mentioned. Since the dealers are not profiting from these giveaways, the users are left with the impression that the dealers are helping them to avoid what are deemed to be unreasonable prices charged by the imported software vendor.

These impediments are slowly having less impact on foreign vendors now that a large number of first-time PC buyers will be upgrading to higher-performance PCs and will look for more sophistication in the software as well. Performance will become more of a yardstick rather than mere price. For industry-related applications particularly, since pirating is less evident and local packages are not simply given away, the picture is brighter.

To a certain extent, the nationalistic fervor, thinly disguised as "frugality campaigns", generated by consumer organizations (which are funded by the government) to shun foreign goods will have a negative effect on individuals buying in the home/hobby market segment and on some smaller office procurements. The major focus is on high-price tag consumer electronics and luxury goods.

Related to this, and unfortunately of more significance, is the unspoken policy of the government sector to buy domestically produced hardware and software whenever products of comparable quality and performance to imported goods are available, or where the difference has no significant effect on the accomplishment of the work for which it is intended.

Particularly for the National Information System and its subnetworks, the government has the added philosophy that using foreign hardware or software would compromise national security since important information of a very sensitive na-

ture will be carried on the networks. These arguments and sentiments are not unlike those found in other countries in principle.

Major Computerization Projects

There are a number of large-scale computerization efforts ongoing in Korea, most of which are either funded entirely, or subsidized in part, by the Korean government ministries, their organs or government-invested corporations. These projects are understandably having a coincidental impact on the software industry and will in part shape a sizable portion of demand for software products over the course of at least the next five years. Each of these endeavors is given separate attention below:

NATIONAL INFORMATION SYSTEM

The National Information System (NIS) is conceptualized to be the backbone computerized network for the exchange of information by the public and private sectors in Korea, and is classified into a number of key areas, each of which will be a nation-wide network itself as a subset of the NIS network. These include the National Administrative Information System (NAIS) and network systems for information pertaining to finance, trade, health, education, and defense.

The infrastructure for the NAIS is essentially complete now as far as the main computer systems are concerned. Medium-scale systems based on technology obtained from Tolerant in the U.S. have been manufactured by four local companies - Samsung Electronics, Goldstar, Hyundai Electronics and Daewoo Telecommunications - and installed at central and provincial government ministries, administrative offices and agencies throughout the country.

DACOM has been charged with development of software for a number of the administrative areas that the network will involve, and this development is still ongoing.

The other five networks are at various stages of development at present; the finance and trading networks have received more attention in recent months. Both public and private companies are involved in developing both on-line and other

software applications, including particularly database management software, for the numerous functions each of these networks is intended to serve.

TiCOM Minicomputer

The same four manufacturers of the Tolerant systems mentioned will begin producing Korea's first self-developed minicomputer, the TiCOM system, in 1992. These systems are intended to become the nodes in the information systems networks mentioned above, serving as batch processors as opposed to the on-line application of the Tolerant-based computers.

The four manufacturers will be trying to sell these computers not only to the government, but to the general domestic marketplace and to export markets as well. In the initial period after their introduction, however, sales will be primarily to the government and to the manufacturers' affiliated companies.

Network Management Systems

The partial liberalization of the International Value-Added Network (IVAN) market in Korea this year and the deregulation of the VAN market for local companies has generated very large interest in this sector of the telecommunications service market in Korea.

Korea Telecom, Korea's dominant public telephone operator (PTO), has also joined DACOM as a basic provider of data communications, and is in the process of installing their own network equipment across Korea. They are also in the early stages of installing lines for ISDN and have limited field testing ongoing.

This activity has meant a sharp increase in demand for computers to function as management systems and nodes for these networks. Coupled with the need for this hardware is the need for software both for management and for the wide variety of value-added services to be offered on these networks.

Computerization in Manufacturing

The Korean government, recognizing that Korean manufacturers are losing price competitiveness in international markets owing to rising production costs attributed in large part to

steeply rising wages, have been rapidly putting forth policy initiatives to increase the level of computerization in factories, particularly those belonging to small- and medium-sized companies.

Manufacturers are being encouraged to automate their production lines through subsidies and other benefits in an effort to keep Korea's export-led economy from running out of steam.

Upgrading Distribution Networks

The mid-year liberalization of Korea's retail markets allowing foreign companies to operate up to ten retail outlets, directly coupled with an influx of distribution outfits through joint-ventures with local companies has forced Korea's distribution industry to prepare for intense competition in the coming years.

Korea's distribution is characterized by small-scale operations, along with a few large department store and supermarket chain operators. As local companies increase the size of their operations, they must invest in more computers and other related hardware and software (including point-of-sales (POS) terminals.

Upgrading Financial Networks

Likewise, financial institutions are undergoing this process in preparation for the opening of Korea's stock market to foreign investors and brokerage firms, to be followed by other liberalizations of related financial markets including foreign exchange trading.

Upgrading is required both to handle the increased number of transactions anticipated and to offer more financial services accessed by computer terminals and PCs.

Computer Purchases for Schools

A program for upgrading the number of personal computers and terminals available in Korea's schools is continuing from 1990 through 1996. A total of 150,000 personal computers are to be supplied over this period. This large volume being supplied will also translate into increased demand for educational software packages as well as general office software for school administrative offices.

Under this program, Korea Telecom is supplying 20,000 personal computers from eight major domestic manufacturers in 1991 to 928 elementary schools throughout the country.

Major Players

LOCAL

Local companies account for the lion's share of earnings from software-related business. Of those companies not among Korea's top manufacturers of computers, the largest company is the Korea Securities Computer Company. Founded in 1977, this company is responsible for the computer operations of the local stock market. Their prime business objective is the automation of the securities business in Korea and the processing and distribution of information relating to the securities markets.

Ssangyong Computer Systems Corporation is another of the large companies involved in the software industry as well as the hardware industry. Established in 1981, Ssangyong is involved in a wide range of activities from system consulting and design to data communications, including sales of computer hardware and software. Ssangyong has their own software packages including a Unix operating system supporting local language and general OA packages. They also distribute technical software solutions for the hardware platforms from a number of foreign makers such as IBM, DEC, and HP, for which they also are a major reseller.

Similar to Ssansgyong, Goldstar Software, Ltd. also has developed OA, FA, data communication and MIS software as well as CTS and other electronic publishing software since their founding in 1985. Several of Goldstar's OA packages have been selected as the standard software for the NAIS discussed earlier in this report. Goldstar is also one of the companies providing software support for the Defense Ministry.

Union Systems, Inc., established in 1982, is also involved in system consulting and design. Like the two former companies, they are also engaged in various facets of the telecommunications service business in Korea. A distributor of mapping systems for Intergraph and systems for Datapoint and IBM, Union was designated as one of the promising small and medium industries in Korea in 1987 and was awarded the "International Trophy for Technology" at the 11th International Technolgy Contest sponsored by the Editorial Office in Spain for their MIS and factory automation solutions.

Korea Computers Inc. develops and sells software packages as well as distributing Tandem's minicomputers and producing the PINNACLE banking terminal. Their software packages include Stock Information Management and a number of general office applications. They also participate in the software development for the NAIS network.

Byucksan Information Industries Co., Ltd. is considerably smaller than the other companies mentioned thus far since the company was established only recently in 1988. Their activities include the development of general office software as well as Resident Information Management and Land Management programs for the NAIS network. They distribute multiuser computer systems for Data General and Unisys, and IBM's personal computers.

The final local company among the top ten is Daou Technology Inc., established in 1986. Daou represents a number of foreign vendors for various hardware products and they have received approval for the introduction of software technology from foreign sources including dBASE III Plus and RDBMS, for which they developed local language versions in addition to local versions of OS 3.0 for Sun Microsystems and X-Windows for Unix. They also are sales representative for CADENCE's MDA software and Intergraph's Microstation PC software.

There are also three joint-venture firms among Korea's top ten software companies. The largest is the joint-venture between the Lucky Goldstar group and EDS of the U.S., Storage Technology Management Corporation (STM). The primary business activities of this firm include systems integration and software design and development, demand processing, facilities management and value-added network services.

Another major joint-venture is that between IBM Korea and the Samsung Group. Like STM, this entity, Samsung Data Systems, concentrates primarily on systems integration; offering software solutions on hardware platforms from IBM, HP, Sun, and Samsung; and on providing value-added network services.

Hyosung Data Systems, a joint venture between Dongyang Nylon and Hitachi of Japan, provides data processing services, software development and sales, system integration and hardware sales of IBM PCs, Hitachi's small-scale systems and microcomputers received on an OEM basis from Unisys. Among the software they develop are applications for MIS, Trade System Management, Savings & Finance Information System and others.

FOREIGN

Only a few of the major foreign software companies have local branches in Korea aside from those that are also the major foreign computer hardware manufacturers including IBM, Unisys, Hewlett-Packard, Fujitsu, Digital, Hitachi, NEC, and many others.

Microsoft Corporation now has a joint-venture with their former agent in Korea. The company, Microsoft CH, is run by the founder of Qnix Inc., a manufacturer of personal computers and peripherals. The venture is expected to earn some US$21 million in revenues in FY1991.

In addition to obtaining the bulk of these revenues from licensing fees for Microsoft's MS-DOS operating system software, used by Korea's PC manufacturers on all but a few thousand Unix-based units produced a year, Microsoft CH also sells business application packages and upgraded versions of their operating software. Microsoft CH, with 40 employees, has a network of over 200 dealers in Korea for distribution of its software applications.

Lotus of the U.S. operates a local branch office which oversees the operation of their five distributors for spreadsheet and other business software packages in Korea and Oracle recorded US$10 million in DB package sales in 1990.

Software for Macintosh personal computers is sold by Apple Computer's sole distributor in Korea, Elex Computer, through their network of over twenty dealers. Apple's PCs made up less than one percent of the 500,000 PCs shipped in Korea in 1990, but they have been successful in building a strong niche in the desktop publishing market.

Software from a number of other companies offering general business packages such as Ashton-Tate, Oracle, Software Publishing Corp. and others is available through distributors in Korea.

Distribution Channels

The unique circumstances and product offerings relevant to each Canadian company giving thought to offering their software programs in Korea make it impossible to provide a comprehensive guide to establishing channels of distribution which will be appropriate for all readers of a report such as this. Instead, some general considerations are mentioned here which may be of importance to a fair number of readers.

Companies intending to make an entry into Korea's market are advised to seek consultation on an individual and detailed basis regarding this and other subjects discussed in this report prior to launching local operations.

Factors Relating to System Size

For software written for particular large-scale systems or for applications which are generally run on systems in this size class, one important characteristic of Korea's market is that hardware vendors with local branches (including IBM, Unisys, Fujitsu, Control Data, Digital and Convex) distribute systems in this size class directly through their own local sales force.

If the hardware vendor does not have a comparable software offering of their own, they can act as a representative for the importer. This approach has an advantage in that the hardware vendor can market the software together with the system. They would also be in a position to know what software solutions their existing customers are looking for.

The primary or sole distributors for large-scale systems vendors without direct operations locally (including those for Hitachi/NAS, Cray and NEC) can fulfill the same role. Unless the software has very wide appeal in this size class, a large sales infrastructure is not recommended because of the small number of systems sold yearly and the relatively small installed base at present.

For technical workstations and some minicomputers, many systems sales are made by system integrators who offer package solutions on one or several hardware platforms or through other indirect channels. Although in the U.S., workstations are handled much more through value-added resellers than general dealers, in Korea, most resellers have not yet acquired enough expertise to customize software and add true value. Depending on the nature of the package and the popularity of the hardware platforms supported, software manufacturers may select one distributor for their software or several.

The domestic PC market in Korea has slowed and sharp price declines have all but erased profit margins for all concerned. Dealers must turn to other hardware and software sold with the PCs or separately for their profits. Unfortunately, for reasons mentioned earlier in this report, users are reluctant to pay high prices for software purchases. Software suppliers must talk with a number of potential distributors to find one who can accept modest margins and generate sufficient demand.

User reluctance will slowly fade as they become accustomed to the price/performance considerations in buying software, and as this happens, pricing arrangements with distributors can be reevaluated.

Foreign PC software producers with local branch offices are limited to a few of the biggest (such as Lotus) because of the low level of demand still evident both for reasons described above and because of the low level of sophistication which has characterized Korean PC users until very recently. Rudimentary OA packages offered by domestic PC manufacturers have been enough to meet the needs of the majority of office workers up to now.

Pros and Cons of the Chaebols

Korea's giant conglomerates, called "chaebols", are very active in distributing imported products in addition to offering their own, which often may be in direct competition with these very same imported products. There are a number of important things to consider when evaluating their potential as distribution partners.

Five of Korea's six largest PC manufacturers, which account for 70% of PC shipments to the domestic market annualy, are members of the largest chaebols in Korea. This assured them of initial success when they first began producing PCs, because they had a waiting and captive market in their sister companies. This captive market still exists today, although to a reduced extent. Given a relative parity of products, these companies will buy from their affiliates whenever pressured to.

This would seem to make them an obvious choice as a distributor then, given the size of this captive demand, but there is an equally important drawback - working with one chaebol can limit access to potential buyers in another chaebol's group of companies.

Another problem is that because of their large organization and resources, too many suppliers are knocking on their door. Thus they either tend to be very one-sided in deliberating terms or they are involved in distributing so many products, they are not able to give ample time and resources to any one of them. Thus the adage "big is not always better" can have important applications here.

Their size and close ties to the political and professional community can be very beneficial in gaining government and educational accounts, however.

There are other chaebols and large corporations who have only a minor or no presence in the domestic PC hardware market that have potential as local partners as well and do not have some of these negative aspects. However, they may be lacking experience in certain areas of significance relating to a supplier's target market and must be evaluated carefully.

Smaller Enterprises

The government is exerting pressure on these large "chaebols" to hand over nonstrategic business areas to small- and medium-sized companies in an effort to more equally distribute resources and wealth. There are financial and other incentives offered to these smaller entities to enter business areas that promote the infusion of technology into the industry. This can make them attractive alternatives to the larger corporations provided that they have the necessary knowledge of the appropriate market sector and have adequate human resources to devote to marketing efforts.

As is the case with the smaller software developers, however, those with particular expertise are much in demand and it is dificult to convince them to dedicate their efforts to one supplier's products. It is important to find a company whose other products are complimentary and do not demand resources to the extent that they are not adequate for the foreign company's own products.

Local Language Requirements

Many of the foreign suppliers of software products to the Korean market find it easier to localize their products for Korean language by working from existing Japanese or Chinese versions, since they also require a 16-bit code. Depending on the facilities and human resources available, some companies have elected to actually develop the Korean version of their software in Japan or Taiwan.

For those companies who cannot or prefer not to take this approach, the extent to which a Korean company can assist you in localizing your product, either directly or in cooperation with other software developers with which they have or can establish a good working relationship, is a key criteria to evaluate in selecting distribution partners.

The nature of the application will determine how time-sensitive this development process is. For software that is highly scientific or requires extensive mathematical compu-

tations, for example, it is not as critical that a local version be developed immediately. At the other end of the spectrum, localization is obviously a high priority for software in applications such as desktop publishing where Korean fonts will be used to a large extent. Whether or not there are competing products available on the market which support local language will also make a difference in how priorities are set.

Physical Distribution

This aspect was touched on earlier in the report but is also important as it relates to local distribution. If there is no direct local presence, it is understandably less desirable to have copies produced locally from the standpoint of the potential for piracy. On the other hand, if the volume of copies sold is large, it can be economically disadvantageous to import all the copies required and can also create delays in supply.

More than likely, for the importer just entering the market, this issue will not arise until some time after this initial entry. It is important to concentrate on ensuring that the business philosophy of a potential partner is suitable to the foreign partner.

DISTRIBUTION OF LOCALLY-PRODUCED SOFTWARE

Over the past year, a number of companies have been established that concentrate especially on the distribution of software. The majority of these companies are also engaged in the distribution of computer systems, chiefly PCs, peripherals and other hardware. It is hoped that companies like these will go a long way in raising public awareness of the locally produced software that is available.

Many of these new ventures are invested in by major players in the information industry and have sufficient manpower dedicated to them to form the core from which a national distribution network can be extended.

Many of these new companies are already representing foreign software from Microsoft, Lotus, Norton, and others along with the local branded software from the developers they are working in conjunction with.

Korea Telecom is also in the final stage of preparations to launch a software distribution center by the end of the year which will support local developers and distribute their products and also support users with a variety of services.

Market Assessment

DOMESTIC MARKET

The Electronic Industry Association of Korea (EIAK) estimated that revenues from software program sales domestically reached US$253.8 in 1990, up 13.5% over the previous year (see Table 1). This annual growth is almost double that of the previous one-year period, but far less than the growth of over 60% recorded in 1988.

These revenues do not include software revenues from hardware sales by system integrators, which together were valued at US$154.9 in 1990, up 65.3% from the previous year.

The past year saw a marked jump in the share of revenues brought in through indirect sales channels, while direct sales fell sharply (although if direct sales by hardware companies developing software were included, this negative growth would be compensated for).

TABLE 1

Revenues from Domestic S/W Program Sales, 1987-1990

(Units: US$ M)

PROGRAM S/W	1987	1988	1989	1990	Growth
Direct	103.1	148.9	146.5	111.9	-23.6
Indirect	7.3	11.9	3.9	35.6	812.3
Imported	15.1	40.9	68.0	94.7	39.3
Other	3.3	6.1	5.2	11.6	123.1
TOTAL	128.8	207.8	223.6	253.8	13.5

Source: EIAK

Note: Statistics for Tables 1 & 2 have been converted from won to US$ at the arbitrated exchange rate on Nov. 1st, 1991 of US$1=750 Won.

Table 2 provides a breakdown of software revenues for 1990 by the type of software sold. System software grew about 25% to represent almost half of total revenues. Operating system software continued to account for the largest share of all subcategories of both system software and application software types.

Office automation software enjoyed stellar growth in 1990 and became the major type of application software sold, while factory automation software sales, riding high in 1989 when the bulk of enterprises upgraded automation, declined somewhat in 1990. Distribution software sales are expected to pick up considerably in the current year despite having dropped sharply in 1990.

The largest portion of 1990's US$253.8 million in software revenues came from software sold for use on mainframe systems. These sales, up 36.4% from 1989, made up 57% of the total last year. PC software accounted for the second-largest share at 22%, falling over 30% from the previous year. It is estimated, however, that another US$13 million won worth of software was shipped by PC manufacturers with PCs sold. Sales to microcomputers (including supermicros) made up all but US$3.7 million won of the remainder, rising the most at 60%.

TABLE 2

Software Revenues by Type, 1989 vs. 1990

(Units: US$ M)

SOFTWARE TYPE	1989	1990	Growth (%)
System S/W	90.8	122.1	34.5
Operating Sys.		77.2	
DBMS		20.5	
Language		7.3	
Other		17.1	
Application S/W	130.8	109.1	-16.6
MIS	25.9	26.7	3.1
Distribution	15.1	8.7	-42.4
OA	10.8	35.1	225.0
FA	33.8	27.3	-19.2
Other	45.2	11.3	-75.0
Other	2.0	22.5	1,025.0
TOTAL	223.6	253.7	13.5

Source: EIAK

IMPORTS

Looking again at Table 1, the share of domestic software revenues attributable to local distribution of imported software has grown yearly from slightly less than 12% in 1987 to a full 37% in 1990, indicating one area of the domestic software industry that is still particularly weak.

A good deal of these revenues from imports are for systems software. This is especially true for operating system software, because up to now the overwhelming majority of multiuser computer systems sold in Korea and all technical workstations sold before 1991 have been by foreign manufacturers' local vendors.

Even in the case of personal computers, although the local PC manufacturers control a full 90% of the shipments, they are virtually all shipped with MS-DOS operating systems for which the manufacturers must pay royalties to Microsoft.

Korea's domestic software developers have concentrated their efforts on the development of application software for predominantly general business management functions and some special industry applications such as construction, financial services and health care.

The United States is the dominant source for software imports, their share has grown steadily over the past several years to more than 63% in 1990 according to the Ministry of Trade and Industry. The European Community and Japan constituted the bulk of the remainder at 15% and 11% each. Canadian firms importing to Korea brought in less than a 3% share.

EXPORTS

Statistics released by the Ministry of Trade and Industry show the value of Korea's software exports to be only US$15 million in 1990 (see Table 3).

Although these exports rose considerably in 1988, they have been stagnant since then, and their relatively small value overall indicates the smaller emphasis placed on this market as opposed to the domestic one.

Because developers must assign their manpower to the development of application software that to some degree or another supports the local Korean language, until the shortage of manpower is alleviated, all but the largest organizations will have to forego sizable sales to export

TABLE 3

Revenues from Exports of Korean Software, 1987-1990

(Units: US$ M)

1987	1988	1989	1990	Growth
7	14	16	15	-15%

Source: MTI

markets, with the exception of those that accompany sales of telephone switching systems or other communications equipment.

Over two-thirds of these exports went to countries in the Asia/Pacific Rim, primarily Japan and Taiwan in 1990. The United States made up another fifth of the total. Japan and Chinese-speaking countries are better suited for adaptations of Korean-text software because these languages, like Korean, require a 16-bit code.

Future Prospects

The future prospects for Canadian firms wishing to participate in Korea's software market are very bright as evidenced both by the local industry being in a very weak competitive state and by the Korean government's strong desire to nurture the software industry through all means possible. These means include infusion of foreign technology and high-technology products and other cooperation between domestic and foreign organizations.

A study completed at the end of 1990 by a team of researchers from a major Korean university, the EIAK and KOSA, identified key problem areas that will impede the development of the domestic software industry. The study's findings and recommendations indicate some of the many opportunities available to foreign software companies:

Hindrances to Development

1) Weak Structure of Companies and Industry Foundation

The current scale of local software companies is small and their revenues, capital, manpower, and equipment are insufficient.

These companies are earning low profits while costs are continually rising. They are lacking operating funds and their financial structure is weak at a time when competition is excessive and demand is low.

Reflecting the short history of the industry, systematization, cooperation, the level of specialization, and the amount of specialized manpower available are not sufficient.

Confidence in these companies is not high and they present inadequate vision for the future. As a consequence, manpower is flowing out to other industries and these companies are experiencing many problems in securing investment funds.

2) Weak Product Understanding and Market Foundation

Because of the prevalence of software provided free of charge, insufficient marketing activities and public relations, exaggerated claims in advertising and promotion of mistrust, the value of domestic software products is not clear to end-users.

Since application software and methods for developing customized software ordered are put first in importance, general purpose software is scarce and possibilities for exporting are greatly restricted.

The pricing system for software is not well established and the bidding system used in purchasing by numerous organizations is not suitable to the industry.

The absence of a distribution network is one of the most pressing problems in building a solid market foundation. Information regarding the products is not adequately furnished to the user community.

3) Weak Local Technology Development Capability

There is an acute shortage of specialized manpower for developing high software technology which in turn has caused a shortage of new product development. The level of core software technology is also low and funding for technology development needs to be increased dramatically.

4) Deficient Industry Policies

More financial, tax, and administrative assistance is needed along with more cooperation and effective communication amongst the related government ministries and associations.

Support Measures

To help overcome these obstacles, the Ministry of Trade and Industry announced a number of countermeasures in June of 1991 for fostering the software industry, as well as the larger data processing industry. Included in these countermeasures are the following:

A. Support for Software Industry-related Manufacturers

Laws and policies relating to support measures for small and medium industries have already been revised to include software and other data processing companies.

Principles established for rendering support in scouting out promising medium and small industries include computer organizations and program developers (excluding those companies that are 51% or more foreign-invested). Under this program, companies have access to financial, administrative and other support from as many as 42 support organizations including 26 special, Seoul city and regional banks.

Software program developers and software medium manufacturers are also eligible for technology development business support under the 1991 Industrial Development Fund for High-Tech Industries. This fund provides advances on a scale of roughly US$65 million to be repaid within five years including a two year deferment. This funding may constitute up to 70% of the total funds required by a company.

Software companies are also included under the Foundation Support Law for technology-intensive industries.

Follow-up measures planned call for the reinforcement of this support system through the granting of more favorable electricity rates and inclusion of software companies in the business areas eligible for rediscounts on commercial loans. This reinforcement will also involve increasing the level of collaboration between the software companies and other small and medium enterprises.

B. The scale of policy financing for general purpose software and software technology development has been set at US$4 million each in 1991 (subject to revision later in the year) and US$6.7 million each in 1992. The government has set a lofty goal of attaining annual exports of US$5 billion in software by the year 2000.

C. Support for the Construction of an IP Industry Complex

A cooperative complex for around 50 companies which is scheduled to open in May of 1993 will be constructed as a means of promoting the distribution of technical information through centralization of information processing companies' operations and to increase collaboration and specialization in the industry. This support includes the reclassification of the complex site from a preserved area to an area for development and the provision of cooperative business funding.

D. Information processing industry manpower training and education will be extended through both increasing the number and capabilities of public and private training institutions in Korea.

E. The ministry also intends to push forward with the standardization of information processing technology by increasing the speed and efficiency of the process for setting KS standards. The level of standards established is slated to increase from only 158 items in 1991 to 700 items by 1997.

Further, the measures call for the establishment and operation of an Information Industry Standards Institute and provide funding for development of basic industry technology to companies at the forefront in standardization of technological development. Korea will also tie in to the international standardization efforts of the ISO/IEC and other international organizations.

F. The ministry has also announced an expansion of export support mechanisms for the software industry including strengthened local and overseas promotion and active efforts to attract Japanese information processing companies to set up operations in the Masan Free Export Zone in order to expose Korean manpower to high-level software production.

G. Expansion of the Demand Base for IP Products

The government intends to make practical use of domestic information processing companies in the extension of computerization and automation in each major industry and trade area in Korea.

In order to promote localization of software for Korea's large-scale computer project, a tariff exemption certification procedure will be used for high-technology software imported for localization.

Demand analysis of the government's and government organizations' scheduled purchases of data processing products will be undertaken and results provided to concerned companies. This analysis will include medium- and long-range procurement plans and technology development investment guidance.

H. Improvement of the Government's Procurement System

The government will make a transition from the current general competitive bidding system to the use of a more flexible one that may involve the designation of specific bidding companies, restrictions on companies allowed to submit bids, and private contracts with a group of companies.

I. Software Distribution Promotion

The operation of a permanent software exhibition center within KOEX and the fostering of private companies specializing in software distribution are two ways in which the MTI hopes to expand private industry's software distribution capabilities.

Thought is also being given to opening a Korea Electronic Information Store, and the Korea Electronics Show held yearly by the EIAK may be expanded to include more in the way of software exhibits.

H. Furtherance of International Cooperation for Data Processing-related Subjects

Because of similar requirements in writing software codes for the Korean, Chinese and Japanese languages as well as the geographic proximity of Taiwan and Japan to Korea and the advanced state of particularly Japan's software industry compared to Korea's, the government will be trying to increase the level of Korea's cooperation and information-sharing with these two countries.

Encouragement and financial support will also be given to Korean companies to participate in overseas trade shows and conventions.

Areas of Opportunity

There are three major areas of opportunity in Korea's software market for Canadian companies. First, as described above, Korea's software industry is still early in its development and weak in many aspects. Particularly for systems software, the market is heavily reliant on imported products and this situation will not change quickly. Thus, a strong opportunity for sales of packaged software exists which will continue for at least the next five years.

One particular weakness of the domestic industry, the low level of technology existing, provides the second area of opportunity for those foreign companies interested in providing technical assistance or technology transfers. This may also be arranged along with a distribution agreement for the Canadian company's products in Korea.

A third opportunity, related to those just mentioned, is for importing software products to Korea that, when localized, will either be of benefit to Korean companies that are computerizing and automating their operations to reduce costs and regain export competitiveness, or that are of necessity for use in Korea's computerized information network system or other projects mentioned earlier because local companies lack the ability to provide the required products.

In light of the drives for computerization in major industries and the growth in installations of computers of virtually all size classes, following are some of the key software and application areas that will enjoy rising demand over at least the next few years in Korea:

* Factory Automation, Computer Integrated Manufacturing, Materials Resource Planning (MRP), etc.

* Computer-aided design, manufacturing and engineering (CAD/CAM/CAE/AEC)

* Software development tools (CASE)

* Technical and desk-top publishing (DTP), image processing, 3D graphics

* Data base management

* Network Management System (NMS) and other communications software (including those for satellite)

* Value-added Services software for value-added networks

* Distribution and point-of-sale (POS) software

* Business management software for PCs

Note: Unix software is particularly in demand for technical workstations. Korean software engineers have had limited experience with this environment and there is little local software available. Personal computers running Unix are not popular as of yet, though, and only a few thousand were installed as of the end of 1990.

The outlook for Korea's software market is for sustained growth of 30-35% annually over the next five years. Foreign dependency will reduce only gradually during this time from the current level of 45%. Although the Korean government expects to attain exports of US$5 billion by the year 2000, the industry cannot possibly attain anywhere near this performance within that time frame. More likely, exports will remain at their current low level for the next one or two years and increase gradually over the next three.

APPENDIX A

Relevant Government Ministries and Industry Associations

Ministry of Trade and Industry
Information Equipment Department
Mr. Baek, Man-gi, Manager
1 Joongang-Dong, Kwacheon-Si,
Kyunggi-Do, Korea
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Electronic & Telecommunications
Research Institute (ETRI)
TDX Development Division
Software Engineering Research Dept.
Mr. Han, Ki-cheol, Department Head
161, Kajeong-Dong, Yoosung-Ku,
Daejeon-Si, Korea
Zip: 305-350
Tel: 042-820-6719
Fax: 042-861-1033
-Computer Research Division
1) S/W Engineer. Research Dept.
2) System S/W Research Dept.
3) Automation S/W Dept.
-Information Technology Division
Data Processing Devlp. Dept.

Korea Institue of Science and
Technology (KIST)
System Engineering Center
Mr. Sung, Ki-soo, President
1, Eoeun-Dong, Yoosung-Ku,
Zip: 305-333
Tel: 042-829-1114/1121
Fax: 042-861-1999
* S/W Engineering Dept
Mr. Park, Byeong-ho, Dept. Head

Information Professionals
Association of Korea
Mr. Park, Jong-hyun, Chairman
1F, Samdo System B/D, 342-14,
Seokyo-Dong, Mapo-Ku, Seoul, Korea
Zip: 121-210
Tel: 338-9967 Fax: 337-9747
* S/W Engineer. Research Commit.

Ministry of Science & Technology
Information Industry Tech. Dept.
Mr. Lee, Moon-gi, Manager
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Kyunggi-Do, Korea
Zip: 427-760
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Korea Advanced Institute of
Science & Technology (KAIST)
AI Research Center
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Daejeon-Si, Korea
Zip: 305-701
Tel: 042-829-8712
Fax: 042-829-8700

Korea Computer Research
Association (KCRA)
Mr. Lee, Hun-joh, President
4F, Sungje B/D 467-3, Seokyo-Dong
Mapo-Ku, Seoul, Korea
Zip: 121-210
Tel: 323-6291/3 Fax: 333-8990
* The 8th Subcommittee(S/W Devp)

The Federation of Korean Information
Industries (FKII)
Mr. Lee, Yong-teh, Chairman
13F, Jeonkyungryeon Hall, 28-1,
Yeouido-Dong, Youngdeungpo-Ku,
Seoul, Korea
Zip: 150-010
Tel: 780-0201/6 Fax: 782-1266
* Computer Program Infor. Center
(Computer Program Registration
Room)

Korea Computers Co-operative
Mr. Kim, Sung-soo, President
Rm 706, Sm & Med Enterprise Hall
16-2, Yeouido-Dong, Youngdeungpo-
Seoul, Korea
Zip: 150-010
Tel: 780-0511/3 Fax: 780-7509
* S/W Subcommittee: Computer
Program., Engin., OA, FA, etc.

EDP Auditors Association Seoul Chapter
Mr. Kim, Kil-cho, Chairman
Rm 615, Jeoksun Hyundai B/D,80,
Jeoksun-Dong, Jongro-Ku,
Seoul, Korea
Zip: 156-756
Tel: 815-1211 Fax: 816-9938
* Program Committee(S/W Devel.)

Korea Infor. Science Society
Mr. Kim, Ha-jine, President
Rm 410/2, Murijae B/D, 984-1,
Bangbae 3-Dong, Seocho-Ku,
Seoul, Korea
Zip: 137-063
Tel: 588-9246/7 Fax: 521-1352
* Subcommittee:
S/W Engineering
Artificial Intelligence
Database
Programming Language
Graphics & Design Automation

Korea S/W Industry Association
Mr. Song, Byung-nam, Chairman
Rm 805, Region Admini. Hall
234-2, Kongdeok-Dong, Mapo-Ku,
Seoul, Korea
Zip: 121-020
Tel: 02-704-3411/4 Fax: 02-704-3415
* Information Industry Dept
Mr. Park, Jae-in, Dept Head

Korea Database Industry Association
Mr. Kim, Chul-woon, President
2F, KOEX, Samsung-Dong, Kangnam-Ku,
Seoul, Korea
Zip: 135-090
Tel: 551-5764 Fax: 551-5736

Open System Interconnection Association
Mr. Chung, Seon-jong, President
Rm 1003, Moksan 1th B/D, 156,
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Electronics Industry Association of Korea (EIAK)
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Data Communication Business Group
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* Business Planning Bureau
Mr. Hong, Dong-soo
- Information Tech. Develp. Department
Mr. Han, Dong-hoon, Department Head

Korean Professional Engineers Association
Mr. Kim, Kyu-tai, President
Rm 401, Science Tech. Hall,
635-4, Yeoksam-Dong, Kangnam-Ku, Seoul, Korea
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Tel: 566-3875 Fax: 557-7408

DACOM
Mr. Lee, Eung-hyo, President
65-228, 3-Ka, Hankang-Ro,
Yongsan-Ku, Seoul, Korea
Zip: 140-716
Tel: 791-1184 Fax: 796-8500

APPENDIX B

List of Major Software Developers & Distributors

A-Point Data Co.
Mr. Ahn, Dong-shik, President
1451-87, Seocho-Dong, Seocho-Ku,
Seoul, Korea
Zip: 137-070
Tel: 522-7773 Fax: 522-7779

Advanced Technology System Co.
Mr. Kang, Won-yun, President
8-61, Galwol-Dong, Yongsan-Ku,
Seoul, Korea
Zip: 140-150
Tel: 771-5800, 319-1110
Fax: 757-7185

A.I. Soft Korea, Inc.
Mr. Suk, Kwang-oh, President
628-14, Yeoksam-Dong, Kangnam-Ku,
Seoul, Korea
Zip: 135-080
Tel: 558-5250 Fax: 569-1243

Almighty Computer Co., Ltd.
Mr. Park, Yong-pal, President
1589-14, Seocho-Dong, Seocho-Ku,
Seoul, Korea
Zip: 137-070
Tel: 586-7361 Fax: 582-5536

Byucksan Information Industry
Co., Ltd.
Mr. Kim, Soo-bum, President
22-1, Ssangrim-Dong, Joong-Ku,
Seoul, Korea
Zip: 100-400
Tel: 279-0201 Fax: 271-1666

Cadland Inc.
Mr. Yoon, Jay-joon, President
1358-6, Seocho-Dong, Seocho-Ku,
Seoul, Korea
Zip:137-070
Tel:557-4888 Fax: 554-2096

CIES Group, Inc.
Mr. Kim, Jin-hong, President
537-20, Bangbae-Dong, Seocho-Ku,
Seoul, Korea
Zip: 137-062
Tel: 588-9570 Fax: 588-9571

Computer Associates Korea Ltd.
Mr. Lee, Yong-chu, President
5F, Kyumyung B/D, 584, Sinsa-Dong
Kangnam-Ku, Seoul, Korea
Zip: 135-120
Tel: 512-2031 Fax: 549-5736

Dae Myung Systems, Inc.
Mr. Oh, Chul-sung, President
43,Yeoeuido-Dong,Youngdeungpo-Ku,
Seoul, Korea
Zip: 150-010
Tel: 780-0016 Fax: 784-8165

Daewoo Information Systems Co.
Mr. Suh, Hyung-suk, President
541, 5-Ka, Namdaemun-Ro, Jung-Ku,
Seoul, Korea
Zip: 100-095
Tel: 756-3816, 773-3090/6
Fax: 773-9934, 773-5450

Daewoo Telecom Co., Ltd.
Mr. Park, Sung-kyou, President
541, 5-Ka, Namdaemun-Ro, Jung-Ku,
Seoul, Korea
Zip: 100-714
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Daou Technology Inc.
Mr. Kim, Ik-rae, President
648-23, Yeoksam-Dong, Kangnam-Ku,
Seoul, Korea
Zip: 135-080
Tel: 556-1251 Fax: 555-0141

Elex Computer, Inc.
Mr. Lee, Yoon-Kee, President
27-2, Yeoeuido-Dong, Youngdeungpo-Ku, Seoul, Korea
Zip: 150-010
Tel: 780-4545 Fax: 785-4838

Goldstar Software, Ltd.
Mr. Hwang, Chil-Bong, President
275, Kongdeok-Dong, Mapo-Ku,
Seoul, Korea
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Tel: 705-3715/7 Fax: 701-1018/9

Hyosung Data Systems, Ltd.
Mr. Yang, Dae-won, President
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Kolon Engineering Co., Ltd.
Mr. Chung, Kyu-hwang, President
45, Mukyo-Dong, Jung-Ku,
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Korea Computer Communications Ltd.
Mr. Kang, Tai-heon, President
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Korea Computers Inc.
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Korea Information Systems Co.
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Gain System Inc.
Mr. Koo, Chi-whoi, President
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Seoul, Korea
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Tel: 585-1114 582-3421

Hanil Computer Service Co., Ltd.
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Kangnam-Ku, Seoul, Korea
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Hyundai Engineering Co., Ltd.
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Korea Business Consulting Co.,Ltd
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Korea Computer Corporation
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Korea Information Computing Co.,
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Korea Securities Computer Co.
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Fax: 784-9125, 782-6359

Kyung Han Systems, Inc.
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Qnix Data System Co., Ltd.
Mr. Kim, Kyung-rae, President
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Sammi Computer Service Co., Ltd.
Mr. Kim, Hyun-jik, President
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Zip: 137-060
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Samsung Electron Devices Co., Ltd.
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Samsung Electronics Co., Ltd.
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Seoul Systems Co., Ltd.
Mr. Lee, Woong-kun, President
150-1, Pyungchang-Dong, Jongro-Ku,
Seoul, Korea
Zip: 110-012
Tel: 357-3631/5 Fax: 357-2341

Sunkyong Distribution Ltd.
Mr. Kim, Jung-hong, President
Dongbo B/D, 71-9, Samsung-Dong,
Kangnam-Ku, Seoul, Korea
Zip: 135-090
Tel: 514-7452/7 Fax: 514-7459

New Computer Service Co., Ltd.
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Companies Specializing in Distribution

Aproman Software Center
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Korea Software Center
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Microland
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Software Exhibitions

As of yet, there is only one major trade show held in Korea which is devoted largely to software - the Computer/Software Exhibition of Korea (SEK). The fifth annual show was held in June of 1991 at the Korea Exhibition Center (KOEX) in the Korea World Trade Center (KWTC) complex in southern Seoul.

The event is managed by the Ministry of Communications and sponsored by The Electronic Times and the Korea Information Professional Association (KIPA). Supporting organizations include Korea Telecom, the Electronic Industry Association of Korea, the Korea Software Industries Association, DACOM and others.

Over 2,100 items from over 200 domestic and foreign computer hardware and software vendors were represented at the exhibition in 1991. Some foreign companies whose software products were displayed by their local offices or representatives included:

Apple (Elex Computer)
Business Software Alliance[1]
Fujitsu Korea
Geoworks
IBM Korea
In Focus Systems Korea
Interface Computer Japan
Microsoft CH
Software Publishing Corp.
Unix System Laboratories
Unify Korea
MIPS

[1]Including Lotus, Ashton-Tate & Microsoft

For information regarding the 6th annual exhibition in June of 1992, contact:

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